



THE ADVISOR

A Publication of the Rocky Flats Citizens Advisory Board

Board Sponsors Workshop to Discuss Surface Water Issues

A workshop held May 30 gave Board members and other stakeholders a chance to better grasp the nature of surface water at the Rocky Flats Environmental Technology Site.

A group of 30 Board members, citizens, city government representatives, state and federal regulators, Kaiser-Hill personnel, and Department of Energy staff attended the event, sponsored by the Rocky Flats Citizens Advisory Board.

Board secretary Shirley Garcia thinks the workshop, given by Department of Energy and Kaiser-Hill staff, gave stakeholders an opportunity to understand the rationale behind surface water policies.

Shirley said Board members who did not attend the workshop "missed out" on a chance to understand not only the technical aspects - sampling, monitoring

and water analysis - but the underpinnings of policy decisions as well.

The Department of Energy is negotiating with state and federal regulators to change portions of the Rocky Flats Cleanup

According to DOE, annual averaging would show a picture of long-term chronic activity levels. Thirty-day averages tend to measure short-range problems, site representatives say.

At the workshop, John

Rampe of DOE commented the new method would give the site more of a "comfort zone" with respect to the standard.

Transitory "spikes" in the data do not occur often but could put the site out of compliance with regulations and subject it to fines, Rampe said. Spikes are points on a graph showing contamination above agreed-upon levels.

In addition, RFCA parties are discussing a change in specific monitoring points from so-called

"points of evaluation" to monitoring points that would be designed to evaluate the effectiveness of remedies when the site is closed.



Pictured above in front of the Rocky Flats Visitors Center are participants in the May 2002 Surface Water Workshop.

Agreement (RFCA) with respect to water monitoring. Perhaps the most controversial issue is a change in the averaging of surface water quality measurements from monthly to yearly at points of compliance onsite.

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News Briefs and Updates

Plutonium Shipments

In late July, Rocky Flats resumed shipping plutonium to the Savannah River Site in South Carolina. The state's governor had tried to block these shipments in suits filed against the Department of Energy, but was unsuccessful. Timely plutonium removal is critical to Rocky Flats' accelerated closure schedule. Removing the plutonium will free up dollars now spent protecting the material so that it can be applied toward cleanup and closure activities. The site hopes to complete the plutonium shipments by the end of 2003.

D&D Status Tour

On June 26, Rocky Flats hosted a tour for community members to view firsthand the progress of decontamination and demolition work in several key buildings at the site.

The featured facility on the tour was Building 771. During the production era, this building was where various chemical operations involving plutonium occurred. A remarkable transformation has taken place in this building. Rooms that were once crammed wall-to-wall with gloveboxes and other equipment now stand empty. Most of the tanks and piping that once held plutonium solutions are gone.

During the tour, participants were allowed to peek into the "infinity" room, a room once so contaminated with plutonium that it was sealed shut more than 20 years ago. In the past year, the room was sprayed with fixatives to stabilize the contamination. Afterward, workers wearing special suits with supplied air were able to once again enter to start removing equipment and other materials.

Another interesting part of the tour was watching workers inside large tents that have been

erected in the building. In these tents, the workers wearing protective suits are able to more safely tear apart large pieces of equipment such as gloveboxes. The tents provide a greater level of protection for workers in other areas of the building. In some cases, equipment is moved into the tents, but where large pieces are involved, the tents are constructed around them.

The other buildings on the tour, 444 and 881, showed similar progress. Building 444 was a former machine shop where beryllium, uranium, and other metals were handled. Building 881 served many functions over the years, including uranium operations, laboratory functions, as well as hosting the central computer facility for the site. Nestled into the side of a hill, this building is almost entirely underground and will present an interesting demolition challenge.

While driving between facilities, the tour hosts pointed out various empty spots in the Rocky Flats skyline where buildings have been demolished. Most notable was the foundation where Building 886 once stood. Demolition of this former criticality laboratory and home to large quantities of enriched uranium solutions was completed this past spring.

Sandia Tour

This summer a small group of RFCAB representatives traveled to Sandia National Laboratory in Albuquerque to view a large-scale field demonstration of various landfill covers. For the past five years, Sandia researcher Dr. Stephen Dwyer has compared the performance of alternative cover designs to the standard RCRA landfill cover. Included in this group of alternative covers is the



evapotranspiration (ET) cover, a design being considered for use at the Rocky Flats site. The ET cover consists of two layers of soil upon which grows a mixture of native grasses. The soil layer basically acts as a sponge, absorbing and retaining moisture until the plants can transpire it back to the atmosphere. Thus, with an ET cover, elements of a natural ecosystem are used to keep water out of the waste, as opposed to a standard RCRA landfill cover that uses an engineered clay barrier to perform the same function.

Results from Dr. Dwyer's study indicate that the performance of the ET cover is equal to or better than that of a RCRA cover. These results must be qualified, however, by the fact that the Sandia demonstration only gathered three good years worth of data. For the last two years of the study, New Mexico has experienced drought conditions that do not put any of the landfill covers to the test. It would have been interesting to see how the covers perform when wet weather visits the area once more, as it inevitably does in the aftermath of a drought. But funding for the study has expired, and Dr. Dwyer anticipates the covers, along with the millions of dollars worth of equipment installed to monitor them, will be dismantled after the close of this fiscal year.

RFCAB Submits Comments on the First Five-Year Review Report for Rocky Flats

In June, the Rocky Flats Citizens Advisory Board (RFCAB) approved its first recommendation of the year, which dealt with a site document then out for public comment, "The First Five Year Review Report for Rocky Flats." Five-year reviews are required at all Superfund sites where a cleanup remedy has been implemented and contamination left behind. Their purpose is to evaluate whether the remedy is still protective of human health and the environment. Reviews may be done more often, but once every five years is the minimal frequency allowed.

The Rocky Flats review found all cleanup actions taken thus far at the site to be protective, but its scope was necessarily limited by the fact that many cleanup actions have yet to be implemented. Thus, the Board's comments focused more on the review process than the findings. Since this is the first time a five-year review has been conducted at the site, the process used may serve as a template for future reviews.

A key concern of the Board was that the review report could be made more understandable to the general public. One way to do this would be to present environmental monitoring data in a more consistent manner. In some parts of the report, data was given numerically in the form of tables, and the Board found this presentation to be quite helpful. In other parts of the report, data was referred to less specifically. As a general rule, the Board recommended that cleanup levels and sampling results be numerically stated for every contaminant addressed as part of each remedial action. Along those same lines, if data or other information used to make the protectiveness determination was not included in the review report, but cross-referenced to other cleanup documents, all such documents should be made available in public reading rooms during the public comment period.

The recommendation also stated that new cleanup technologies should be evaluated on a continual basis as part of any future reviews. The

reason to evaluate advances in technology is to see whether they allow further site cleanup to be achieved in order to reduce reliance on institutional controls. This has been a priority for the Board throughout its history. A statement to this effect also appears in the Rocky Flats Cleanup Agreement, the legally binding pact between the Department of Energy and its regulators overseeing cleanup of the site.

The Board noted that some remedial actions at the site, particularly the groundwater treatment systems, would take place over the course of many decades. Yet the site has established no timeframe over which these systems, if operating effectively, would be expected to reduce contaminants in the groundwater plumes below their respective cleanup goals. In other words, there appears to be no standard of comparison that would enable future reviewers and stakeholders to know whether these remedies are functioning as designed. The Board urged DOE to find a better way to evaluate the performance of these groundwater treatment systems.

Finally, the Board had the following general comments on the review process:

- Interested stakeholders should be given the opportunity to participate on the review team, as suggested by EPA guidance.
- Details from site inspections should be included so that readers will know what criteria were used in the inspections, and what conditions were encountered in the field.
- Future reviews should include, at a minimum, interviews with nearby residents, frequent visitors to the refuge, and the U.S. Fish and Wildlife Service personnel who will be managing Rocky Flats post-closure when it becomes a national wildlife refuge.

Surface Water Workshop (continued from page 1)

Board vice chair Victor Holm said the tour and workshop were valuable experiences. "As to the substance of the meeting I took away two things," Victor said. "The regulations on the water leaving the site will not change. The monitoring of the water at the points of evaluation on site will not change, only the reporting of the averaging. If someone wants to recalculate the averages using the old method, it will still be possible."

Board member Bill Kossack does not like the site's new proposal.

"In a past life I was part of the founding of two volunteer water monitoring programs along the Texas coast," Bill said. "I think their (DOE's) entire approach is designed to not find water quality problems. It starts with the assumption that everything is fine and all they need to show is that it is fine. If you want to find problems, you have to design your approach so that it will find problems."

The purpose of the workshop was to give stakeholders an understanding of surface water sampling and analysis and the proposed changes to averaging water quality.

The meeting began with a tour that took participants north beyond the industrial area into the buffer zone to give them a look at the A and B series of holding ponds. A herd of deer grazed in a field, unfazed by the chain of tour vehicles passing by.

The ponds are designed to protect downstream water quality. Water from the site is held in the ponds and prevented from running offsite before it is tested for contamination and released. Occasionally, however, heavy rain causes Pond B-5 to reach capacity and, before testing analysis is complete, water must be spilled to protect the dam's structural integrity.

The tour stopped at the outlet to Pond B-5, where the GS-8 monitoring system is located. It is one of 52 stations at Rocky Flats. The monitoring system "grabs" one 0.2-liter sample at a time. A number of these small samples are combined into a larger composite sample that is sent offsite for analysis. The number of samples over time depends on the flow - the more the flow, the higher the number of samples in a given time period. This is what site personnel mean when they speak of a "volume-weighted" average.

The tour ended where it began, at Building 60, where stakeholders heard presentations from site representatives about sampling methods and analysis. Regulators talked about proposed changes to the Rocky Flats Cleanup Agreement.

Participants at the workshop engaged in a lively discussion. While some board members said they think the site's proposals would be sufficient to determine if contamination were moving offsite through the surface water, other Board members were concerned the new averaging plan would not be effective.

One Board member stated he believes the new proposal could be perceived as an attempt to deceive the public. Another commented that contaminants will end up in the ponds' sediments.

A regulator at the workshop said the Department of Energy has agreed to set an "action" level for radioactive contamination in surface water of 0.15 picocuries per gram, the standard for drinking water, though the water will not be used for drinking.

The standard for radionuclides in surface water at the site is based on the drinking water standard --

.15 picocuries per liter (pCi/l) which some believe is conservative. It is based on a person drinking two liters of water containing contamination at this level every day for 30 years, which results in one in a million chance of developing cancer.

New Faces at Rocky Flats

Meet the new site manager...

In early August, Eugene Schmitt was assigned to serve as the new Department of Energy (DOE) Manager for the Rocky Flats Field Office (DOE-RFFO). He came to Rocky Flats from the DOE Headquarters Environmental Management (EM) office, where he was Acting Deputy Assistant Secretary for the Office of Policy, Planning and Budget in the Office of Environment. He developed and managed the formulation, presentation, and execution of EM's \$7 billion annual budget. Mr. Schmitt holds a degree in economics from Wheeling College.



*Eugene Schmitt,
DOE-RFFO Manager*

...deputy manager...

Another new face at the site is Kimberly Chaney, Deputy Manager of DOE-RFFO. Prior to her reassignment to Rocky Flats in April, Ms. Chaney was the director for the DOE Ohio Office, in the Environmental Management Program Office in Germantown, Maryland. She was the EM Headquarters' site lead providing oversight of closure activities at the Fernald, Mound, Ashtabula, and Columbus, Ohio sites, and the West Valley Demonstration Project near Buffalo, New York. Ms. Chaney has been with DOE since 1982, and she has more than 25 years of environmental cleanup and project management experience. Ms. Chaney earned a Bachelor of Science degree in Civil Engineering and a Master of Science degree in Sanitary Engineering, both from the Georgia Institute of Technology.



*Kimberly Chaney,
DOE-RFFO
Deputy Manager*

...and the Board's newest volunteer members



New Board members (left to right) front row: Anne Fenerty and Henrietta Jonas; back row: Earl Gunia and Dave Davia.

In July, the Rocky Flats Citizens Advisory Board approved the addition of four new members to replace vacancies that had occurred over the past year. Say hello to our newest members.

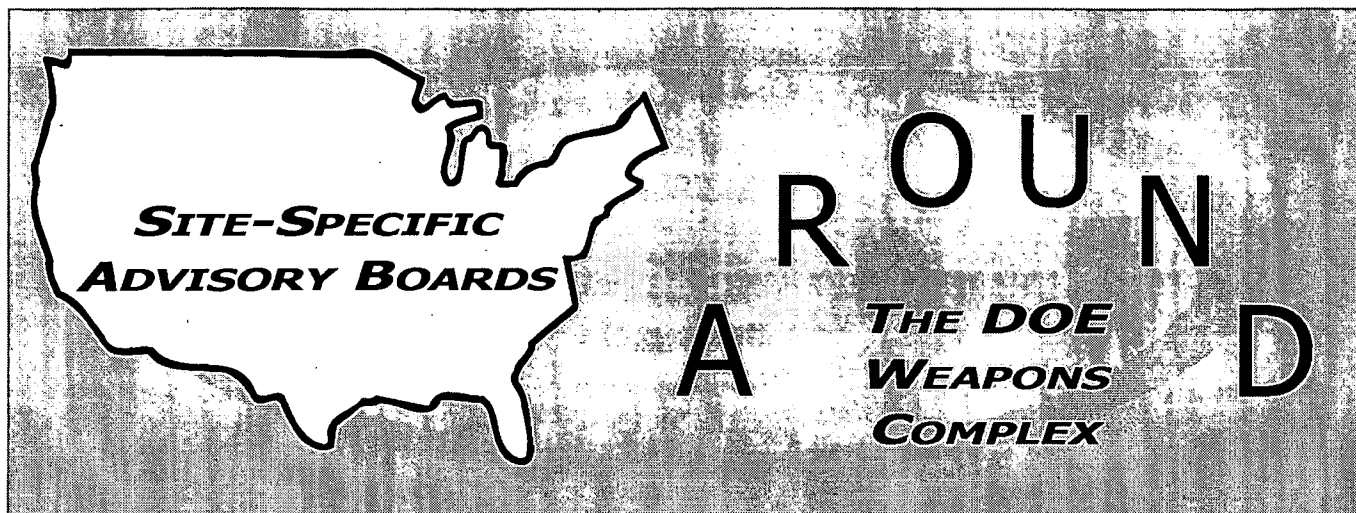
Dave Davia. Dave is a business systems consultant/project manager in treasury management operations for Wells Fargo. He has a diverse background in the financial services industry. A Westminster resident, Dave earned a business degree from Metro State College of Denver.

Anne Fenerty. A resident of Boulder, Anne is a retired chemist and a member of the Indian Peaks Chapter of the Sierra Club. She has a BS in Chemistry from the University of Western Ontario (Canada), an MS

in Inorganic Chemistry from Michigan State University, and has completed some work toward a Ph.D. at London University (UK).

Earl Gunia. Earl is a retired naval officer living in Littleton. He served on nuclear ballistic submarines, at their support sites, and at acquisition command centers. He has a BS in Electrical Engineering from the University of Colorado.

Henrietta Jonas. Henrietta lives in Westminster, is a close neighbor of Rocky Flats and an engineer. She worked previously for Geneva Pharmaceuticals in Broomfield as a packaging engineer. Henrietta has a BS in Mechanical Engineering Technology from Franklin University in Ohio, and an AAS in Medical Laboratory from the Columbus Technical Institute.



This Issue: Northern New Mexico Citizens Advisory Board

The Rocky Flats Citizens Advisory Board is one of nine Site-Specific Advisory Boards (SSABs) that have been formed at former nuclear weapons production sites. In each issue of The Advisor, we spotlight the activities of one of these boards, their respective sites, or other interesting information about the Department of Energy.

It has been more than 55 years since scientists at Los Alamos National Laboratory (LANL) ushered in the Atomic Age with the explosion of the first nuclear bomb at Trinity. Their legacy, however, includes not only scientific achievement, but also the hazardous and nuclear waste they left behind.

The Northern New Mexico Citizens Advisory Board provides advice to the Department of Energy on cleanup at LANL, while the lab continues its mission of weapons development and national security research under the management of the University of California.

Los Alamos laboratory is situated in northern New Mexico on 43 square miles of high-desert mesa that gently slopes from west to east.

The advisory board's focus is evident in its three subcommittees: Environmental Restoration, Waste Management, and Environmental Monitoring and Surveillance.

The Environmental Restoration subcommittee looks at such things as what to do with the 2,100 sites of potential releases of radionuclides, high explosives and hazardous waste that are now being investigated, said Board chair Jim Brannon.

One early practice had some of this waste material deposited in deep holes, some nearly 80 feet deep and four feet across. Waste in these deep shafts was mixed with slurry and allowed to harden. Brannon said it is unknown if the material will migrate or what the future risks might be to human health and the environment. He acknowledges it would be expensive to dig up.

"But what do you do with it?" Brannon asked.

The Waste Management subcommittee concentrates on transuranic (TRU) and other high-level waste, including the 40,000 to 50,000 55-gallon drums of TRU waste, some of which is stored in white "caterpillar tents" on the site. Because wastes may be a tempting target for terrorists and because of the 2000 Cerro Grande fire, which crept dangerously near the lab's door, the site and the advisory board both want the drums to go "quick to WIPP,"

It was nearly 5:30 a.m. on July 16, 1945, at White Sands Missile Range in the southern New Mexico desert. Scientists from the Los Alamos National Laboratory were a few seconds from making history. Their names read like an encyclopedia of the best and brightest in science - Enrico Fermi, Hans Bethe, J. Robert Oppenheimer, Edward Teller, Emilio Segre, and more.

Suddenly, the first atomic fireball rose into the sky, punching into the atmosphere with the explosive power of nearly 20,000 tons of TNT. The Atomic Age was born.

Four hours later, the cruiser Indianapolis left San Francisco Bay carrying Little Boy, the atomic bomb that was to be dropped August 6 on Hiroshima.

Information for this article came from the Los Alamos National web site and *The Seattle Times* newspaper series "Fifty Years from Trinity." For a history of the building of the atomic bomb, go to the Los Alamos National Laboratory web site at:

www.lanl.gov/worldview/welcome/history

Northern New Mexico Citizens Advisory Board (continued from page 6)

the Waste Isolation Pilot Plant in Carlsbad, New Mexico.

"We want them moved," Brannon said. "We don't want them sitting there any longer."

But, he said, there are not enough trucks, drivers, and Trupact-IIs - approved containers - to move all the TRU waste, because those transportation resources are being used to transport waste from Rocky Flats and the Idaho National Engineering and Environmental Laboratory. LANL and other Department of Energy sites are waiting in line to ship waste to WIPP.

Brannon said the advisory board and the site are trying to find ways to speed up movement of the cargo. One option might be to purchase a dedicated set of trucks, trailers and Trupact-IIs just for LANL.

The job of the Environmental Monitoring and Surveillance subcommittee is complicated by the fact that hydrogeological investigations are not

complete. Mr. Brannon said it is not known where all the groundwater is located. What is perturbing to Brannon is that the high, dry climate of northern New Mexico provides highly localized and intermittent rain and snow events, with rapid, high-volume canyon runoff. As a mechanism for moving contamination, this puts added pressure on researchers to determine what may have leached into the groundwater. For some contaminants that might be found offsite, no one could be sure if it were released from a laboratory source.

"It could take a very long time before it pushes its way down into the groundwater," he said. "The situation is likely either the worst and best that it might be. The worst case scenario is that we may only now be seeing the tip-of a much larger groundwater problem." But Brannon added, "or the worst is long since past and we may discover little to no contamination at all. Only time and investigation will tell."

Group Established to Study Wildlife Refuge Issues

The first meeting of the Wildlife Refuge Technical Review Group was well attended and lively. Nearly 20 committee and ex-officio members heard Dean Rundle of the U.S. Fish and Wildlife Service talk on the future refuge at Rocky Flats. Ken Korkia, Rocky Flats Citizens Advisory Board staff member, also spoke about Rocky Flats history.

The group is comprised of citizens with a diversity of backgrounds and interests, as well as academic representatives.

The Rocky Flats Citizens Advisory Board formed this group in June to ensure the Board's involvement in planning for the future refuge. The group was also charged with studying natural resource management issues at the site. The group toured the site August 28 to visit several areas, including the Old Landfill, Preble's Meadow Jumping Mouse habitat, the Lindsay Ranch, and the 903 Pad.

If you would like more information about this group, please contact our office.

RFCAB MISSION STATEMENT

The Rocky Flats Citizens Advisory Board, a nonpartisan, broadly representative, independent advisory board with concerns related to Rocky Flats activities, is dedicated to providing informed recommendations and advice to the agencies (Department of Energy, Colorado Department of Public Health and Environment, and the Environmental Protection Agency), government entities, and other interested parties on policy and technical issues and decisions related to cleanup, waste management, and associated activities. The Board is dedicated to public involvement, awareness and education on Rocky Flats issues.



RFCAB Web site:
www.rfcab.org

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Rocky Flats Public Meeting Calendar

October

3	Rocky Flats Citizens Advisory Board Meeting	6 to 9:30 p.m.	Jeffco Airport
7	Rocky Flats Coalition of Local Governments	8:30 to 11:30 a.m.	Jeffco Airport
7	RFCAB End-State Discussion Steering Committee	6 to 8 p.m.	RFCAB office
17	Wildlife Refuge Technical Review Group	6 to 8 p.m.	College Hill Library
24	Stewardship Working Group	3:30 to 5:30 p.m.	Arvada City Hall

November

4	Rocky Flats Coalition of Local Governments	8:30 to 11:30 a.m.	Jeffco Airport
7	Rocky Flats Citizens Advisory Board Meeting	6 to 9:30 p.m.	Jeffco Airport
11	RFCAB End-State Discussion Steering Committee	6 to 8 p.m.	RFCAB office
21	Wildlife Refuge Technical Review Group	6 to 8 p.m.	College Hill Library

December

2	Rocky Flats Coalition of Local Governments	8:30 to 11:30 a.m.	Jeffco Airport
5	Rocky Flats Citizens Advisory Board Meeting	6 to 9:30 p.m.	Jeffco Airport
9	RFCAB End-State Discussion Steering Committee	6 to 8 p.m.	RFCAB office
19	Wildlife Refuge Technical Review Group	6 to 8 p.m.	College Hill Library

ALL MEETINGS ARE SUBJECT TO CHANGE, PLEASE CALL BEFORE YOU GO: 303-420-7855

Arvada City Hall, 8101 Ralston Road, Arvada
College Hill Library, 3705 West 112th Avenue, Westminster
Jefferson County Airport Terminal Building (Mount Evans Room), 11755 Airport Way, Broomfield
RFCAB office, 9035 North Wadsworth Parkway, Suite 2250, Westminster

Rocky Flats Citizens Advisory Board
9035 Wadsworth Parkway, Suite 2250
Westminster, CO 80021

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